

FIG. 1A

cagaaagaga cctatatgat caaatacaga ac	atg atc ttc ctc ctg cta atg	53
	Met Ile Phe Leu Leu Leu Met	
	1 5	
ttg agc ctg gaa ttg cag ctt cac cag	ata gca gct tta ttc aca gtg	101
Leu Ser Leu Glu Leu Gln Leu His Gln	Ile Ala Ala Leu Phe Thr Val	
10 15	20	
aca gtc cct aag gaa ctg tac ata ata	gag cat ggc agc aat gtg acc	149
Thr Val Pro Lys Glu Leu Tyr Ile Ile	Glu His Gly Ser Asn Val Thr	
25 30	35	
ctg gaa tgc aac ttt gac act gga agt	cat gtg aac ctt gga gca ata	197
Leu Glu Cys Asn Phe Asp Thr Gly Ser	His Val Asn Leu Gly Ala Ile	
40 45	50 55	
aca gcc agt ttg caa aag gtg gaa aat	gat aca tcc cca cac cgt gaa	245
Thr Ala Ser Leu Gln Lys Val Glu Asn	Asp Thr Ser Pro His Arg Glu	
60 65	70	
aga gcc act ttg ctg gag gag cag ctg	ccc cta ggg aag gcc tcg ttc	293
Arg Ala Thr Leu Leu Glu Glu Gln Leu	Pro Leu Gly Lys Ala Ser Phe	
75 80	85	
cac ata cct caa gtc caa gtg agg gac	gaa gga cag tac caa tgc ata	341
His Ile Pro Gln Val Gln Val Arg Asp	Glu Gly Gln Tyr Gln Cys Ile	
90 95	100	
atc atc tat ggg gtc gcc tgg gac tac	aag tac ctg act ctg aaa gtc	389
Ile Ile Tyr Gly Val Ala Trp Asp Tyr	Lys Tyr Leu Thr Leu Lys Val	
105 110	115	
aaa gct tcc tac agg aaa ata aac act	cac atc cta aag gtt cca gaa	437
Lys Ala Ser Tyr Arg Lys Ile Asn Thr	His Ile Leu Lys Val Pro Glu	
120 125	130 135	
aca gat gag gta gag ctc acc tgc cag	gct aca ggt tat cct ctg gca	485
Thr Asp Glu Val Glu Leu Thr Cys Gln	Ala Thr Gly Tyr Pro Leu Ala	
140 145	150	
gaa gta tcc tgg cca aac gtc agc gtt	cct gcc aac acc agc cac tcc	533
Glu Val Ser Trp Pro Asn Val Ser Val	Pro Ala Asn Thr Ser His Ser	
155 160	165	
agg acc cct gaa ggc ctc tac cag gtc	acc agt gtt ctg cgc cta aag	581
Arg Thr Pro Glu Gly Leu Tyr Gln Val	Thr Ser Val Leu Arg Leu Lys	
170 175	180	
cca ccc cct ggc aga aac ttc agc tgt	gtg ttc tgg aat act cac gtg	629
Pro Pro Pro Gly Arg Asn Phe Ser Cys	Val Phe Trp Asn Thr His Val	
185 190	195	

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FIG. 1B

agg gaa ctt act ttg gcc agc att gac ctt caa agt cag atg gaa ccc 677  
 Arg Glu Leu Thr Leu Ala Ser Ile Asp Leu Gln Ser Gln Met Glu Pro  
 200 205 210 215

agg acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc tgc atc 725  
 Arg Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile  
 220 225 230

att gct ttc att ttc ata gcc aca gtg ata gcc cta aga aaa caa ctc 773  
Ile Ala Phe Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu  
 235 240 245

tgt caa aag ctg tat tct tca aaa gac aca aca aaa aga cct gtc acc 821  
 Cys Gln Lys Leu Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr  
 250 255 260

aca aca aag agg gaa gtg aac agt gct atc tga acctgtgggc ttgggagcca 874  
 Thr Thr Lys Arg Glu Val Asn Ser Ala Ile  
 265 270

gggtgacctg atatgacatc taaagaagct tctggactct gaacaagaat tcggtggcct 934

gcagagcttg ccatttgac ttttcaaagc cctttggatg acccagcact ttaatctgaa 994

acctgcaaca agactagcca acacctggcc atgaaacttg ccccttcact gatctggact 1054

cacctctgga gcctatggct ttaagcaagc actactgcac ttacagaat taccocactg 1114

gatcctggac ccacagaatt ccttcaggat ccttcttgct gccagactga aagcaaaagg 1174

aattatttcc cctcaagttt tctaagtgat ttcca 1209

100221-000000

FIG. 2A

Cd80_Human	: MCHTRRQGTSPKCPYINFFQILVAG. LSH. FC. SCV... IHVTKES... VKEVATISG... GHNVSVEELAQTRIMQREKKWVIT... : 75
Cd86_Human	: MGSNRIEFVMAFLISCAAPLKIQ... AYFNEADLPQCFANSQMSISELV... VFQCDQENLVIN... : 60
GA16817596	: MIF... ILLMLISLELOHQ. HAALEFTVTVPEKELYII... EHGSNVT. LECNFDGTGSHNLGAIIT... ASLOK... : 61
B7-H1_Huma	: NRIFAVEIFM... TYWHI. LNA. FTVTVEDKLYVV... EYGSNMT. IECKFPVEKQDLAAL... IVYMEDMDKNII. Q... : 66
B7rp-1_Hum	: MRLGSPG... LLFLFSSIRAEQKEVR... AMVGSIVELSCACPEGSRFDINDV... YVYWOISESKTV... : 62
Pro352_Hum	: MLRRRGSPGCVGHVGAALGAIFWC. LTGALEIVQVPEDPV... ALVGTDAITLCCSFSPGSLAQL... NLIWQIDTK... Q... : 74
Btf1_Human	: MESAAALHFSRPAS... LLLLLLSICAL. VSAQFIVQVGPDPIL... ATVGENTTLRCHLSPEK. NAEDM... EVRWFRSOF... P... : 73
Btsf2a2_Hu	: MEPAAALHFSLPASILLLLLLLSICAL. VSAQFTVVGANPIL... AMVGENTTLRCHLSPEK. NAEDM... EVRWFRSOF... P... : 77
Btf4_Human	: FHVSLLVQLLTPC... SAQFSVLGSPGPIL... AMVGEDADLPCHLFPTM... SAETM... ELKWVSSSLR... Q... : 63
Btn3a3_Hum	: ... MKMASSLAELINFHVSLFIVQLTPCSAQFSVLGSPGPIL... AMVGEDADLPCHLFPTM... SAETM... ELRWVSSSLR... Q... : 74
Btn_Human	: ... MAVFPSSGIPRLITLILQLPKLDSAPFDVIGPEPIL... AVVGEDAELPCRLSPNA. SAEHL... ELRMWFERKVS... P... : 72
Cd80_Human	: ... GDM... NIWPEYKNRT... IFD... ITNNLSIVLALRPSDEGTYECVTKYKDAFKREHIAEVTLSVKADFPPTPSDSFETPTS : 155
Cd86_Human	: EYVL... GKERTSVHSKYMGR... SFD... SDSWTLRHLNLQIKDKGLYQCI THKKPTMIRIHQMNSELSVLANSFOPEI... V. PI : 138
GA16817596	: VENTD... SPHRERATLIE. EQLPLGKASEHFPQVRDEGOYQCIIY... GVA. MDYKYLTKVKASY... RKXNTHILKVP : 134
B7-H1_Huma	: FVH... GEEEDLVQVCHSSYRQRARLIK. DQSLGNAALQTDVKLDAGVYRCMISY... GGADY... KRITVKVNA... PYNKINQRIIV : 143
B7rp-1_Hum	: VTYHIPQNSSIENVDSRYNRNRLMS. PAGMLRGDFSRLRFNVTPODEQKFHCLVLSGL. GFQEVLSVEVTLHVAANFSPVVI... S. APH : 147
Pro352_Hum	: LVHSFAEG... QDGSAYANRTALFP. DLLAQNA SLRQVRVADEGSTCFVSI RDF. G... SAASVLQVAAAPYSKPSM... TLEPN : 152
Btf1_Human	: AVFVYKGREREDEQMEYRGRITFYSKD. ISRGSVALVHNITAEQNGTYRCYF. QE... GRS. YDEAILHLVAGLGSKPLISM... : 153
Btsf2a2_Hu	: AVFVYKGGRETEEQMEYRGRITFYSKD. INRGSVALVHNVTAEQNGTYRCYF. QE... GRS. YDEAILRLVAGLGSKPLIEI... : 157
Btf4_Human	: VVNIVYADGKEVERQCSAPYRGRTSIIR. DGITAGKAALRHNVNTASDSKYLICYF. QD... GDF. YEKALVELKVAALGSLNHVEV... : 141
Btn3a3_Hum	: VVNIVYADGKEVERQCSAPYRGRTSIIR. DGITAGKAALRHNVNTASDSKYLICYF. QD... GDF. YEKALVELKVAALGSDIHIEV... : 154
Btn_Human	: AVLVRHRCREQAEQMPYRGRATLVO. DGIAGKRVALRIIGRVSDDCGEYTCFTR. ED... GS... YEEALVHLKVAALGSDPHISM... : 152
Cd80_Human	: NIR... RIIGSTSGGFPEP. HLSWLENGEELNAINIV... SODPTELYAVSSKIDF... NMTTNSHFMCLIKY... GHLR : 224
Cd86_Human	: SNITENVYINLTGSSIHGYPEPKMSVL... LPTKNSTIEYDGIMQKSDQNVTELYDVSISLSFDPDVTNSMTIFCILET... DKT : 219
GA16817596	: ET... DEVELTQCAT. GYPLAE. VSMPN... VSVPAINTSHSR... TP. EGLYQVTSVIRLKP... PPGRNFSOCVF... WNTH : 198
B7-H1_Huma	: VDPVT. SEHELTCQA. EGYPKAE. VHTTSSDHQVLSGKTTWNSK... REEKLFNVTSLRINT... TTNEIFYCTERRLDPEEN : 219
B7rp-1_Hum	: SPSCQ... DELTFTCTSINGYPRPN. VYM... INKTDNSLLDQALQNDTVFNMRGLYDVSVLRIAR... TPSVNIIGCCTIENVLHQON : 225
Pro352_Hum	: KDLRPGDVTITLTCSSYQGYPEAE. VFQDPCQGVPLTGNVTISQ... MANEQCLFDVHSLVRVL... GANGTYSCLVRNPVLQO... : 229
Btf1_Human	: RGHEDGGIRLEISRQWYPKPL. TVWRDP. YGGVAPAL... KEVSPM. DADGLFMVTTAVIIRD... KSVRNMSCSINNILLGQK : 229
Btsf2a2_Hu	: KAOEDGGIWELEISGGWYPEPL. TVWRDP. YGEVVEPAL... KEVSLA. DADGLFMVTTAVIIRD... KYVRNVSCSINNILLGQK : 233
Btf4_Human	: KGYEDGGIHLERSTGWYPQPO. IQNSNA. KGENIPAV... EAPVVA. DGVGLYEVAASVIMRG... GSGEGVSCIIRNSLLGLE : 217
Btn3a3_Hum	: KGYEDGGIHLERSTGWYPQPO. IKNSDT. KGENIPAV... EAPVVA. DGVGLYAVAAASVIMRG... SSGGGVSCIIRNSLLGLE : 230
Btn_Human	: QVQENGEICLECTSVGWYPEPO. VQNRTS. KGEKFPST... SESRNP. DEEGLFTVAASVIIRD... TSTKKSICYIQLNLLGQK : 228



FIG. 2C

FERL.GSDDSPICEFALTGASGVMVPEEGLKLRVGTQSL

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VERILTTLEPTATITICFIPKEVESSPPDILVPDHSLETLTPGLANESGEPQAEVTSLLIPAHGAEVSPSATTNQNHKIQARTEALY : 584
... :
Bbtn3a3_Hum : VERILTTLEPTATITICFIPKEVESSPPDILVPDHSLETLTPGLANESGEPQAEVTSLLIPAHGAEVSPSATTNQNHKIQARTEALY : 584
Bbtn_Human : FFCFLWSSGKKKPTITICFIADGPERVTVTANAQDLSKEIPLSPMGEESAPRADTLHLSKLIPTQPSQGAP : 526

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Figure 1. The effect of the number of trials on the mean number of correct responses for the 100 trials condition. The number of correct responses was significantly higher than the number of incorrect responses for all conditions. Error bars represent the standard error of the mean.

ataagaagct	gaattaaggt	gatggcagtg	gggtggaaga	aaggagagcc	accatgcaaa	60
aagtatccag	gagggagaat	taacaggact	aggggatggg	ccatatttgc	aagatgagaa	120
atgcagaggt	ctaagattct	agctnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	180
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	240
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nngcataaac	300
catattttcc	ccagaggagg	attagtagga	aaggaagctg	ctggttgga	agtatcttta	360
tagcagtgtc	tgttcctcgg	tttgctcaag	gggacagtg	gccaggaaag	tccccgtgga	420
agggcaagga	agaaggggaa	gttaaagcca	gtggcaggtg	atccaagaat	cttttctgtt	480
gctagagcta	tgttacatgc	tgtcctttca	tgctctaaaa	ataagagtgc	tggaagtgc	540
caggcctgtt	ggtgcagctt	aagatgatac	ctttcttgga	tatatatgca	tctgaataag	600
gaaggctatc	ttctgggtcaa	gctaaggtat	gccatgagca	ttccctgtg	gaaagcactt	660
aattctgttc	ccagttgtta	cctgctgtaa	gatctccctt	tctaaaataa	aaacaagaat	720
acagctcact	gaggacctta	catttccctc	tagctactga	ctcatttctc	ttctcctttt	780
tatagcactc	ttcttgagag	agttgcctat	atttggtgcc	acatctttac	ccattctctt	840
ttgaacctat	tcaagctttc	atctgtacaa	aactcactga	tactgtgctt	gtcaggatca	900
tccatgacct	ccatactgct	aaatgcaact	ctcaagagta	tttggctcta	ctgatcactc	960
ctttgtagca	ctgtgtttta	aaatataggt	tttattatta	tttaggtatg	gtgaggccaa	1020
tatatcagga	aatgactgtc	gttgaaaaaa	gtatgttgta	ctcacagatc	ccaagagaag	1080
gggggcacac	catgccacaa	agggccacat	ggggaagcac	cagggtcagc	caggaggtgg	1140
gtgggggggtg	cgcaagatct	ttattgtggt	ttcaacagga	agaaatgggt	gaagcagggt	1200
gagtggattt	aggattagct	gatataaata	atttcagcag	gctctggggc	ataggggctg	1260
tccctagtct	tctggtactt	ggccctgggg	tgattaaggc	agttgcatag	tgttgggaat	1320
gtgaaagccc	ccaataaatg	aggcagttgt	gggtatgggc	tctgaaatgg	gttggtttgc	1380
atttgaaagg	tgtgctcatg	ggcaagtgg	ttactctctc	ttagagggtta	gaattggcta	1440
accctgggag	cggcagtcct	ttcagggtca	gcaaggcccc	aggtgtcaaa	gcatcagaat	1500
acagaaaata	aaatgcatgg	ataatacaca	ctgccatttg	cctttgtacc	cttcctttca	1560
atcttctctg	ctggtgaccg	ctcttcacaa	aqatctataa	atgttggaat	accccatgtc	1620

FIG. 3B

tcagtccttg ggcactctct ttcctatctc tctgtaggtg atgtaatgca gatatccatg 1680  
 actttaaatc ttttaacactt ctgcattgat gactoctaaa tttacatctc taccocaaact 1740  
 gcctactaaa cacctccact tggctatcta ataggcattt caaaccaaact ctacaacaaa 1800  
 cgtaactctt tttccccttc cttaatttgc ttctcccca gccttctcca ttttaataaa 1860  
 cagcatctcc attgccttag tgactcaagc cccaaactta ggaattttcc cagatttccc 1920  
 tctttttctc aaactatata tctagcctgt cagcagttcc cttcaggtct tttttcnnnn 1980  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2040  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2100  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2160  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2220  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2280  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2340  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2400  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2460  
 ctaannnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2520  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnngctc 2580  
 catttatatt tannnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2640  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2700  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2760  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2820  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2880  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 2940  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3000  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3060  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3120  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3180  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3240

1000 900 800 700 600 500 400 300 200 100 0

Figure 1. The 1000 most abundant taxa in the 1000 most abundant taxa list. The taxa are listed in descending order of abundance. The taxa are grouped into 10 categories: Bacteria, Eukarya, Archaea, Fungi, Plantae, Animalia, Protista, Viridiplantae, Chromista, and Metazoa. The taxa are listed in descending order of abundance. The taxa are grouped into 10 categories: Bacteria, Eukarya, Archaea, Fungi, Plantae, Animalia, Protista, Viridiplantae, Chromista, and Metazoa.

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ccaagcacca	caaaaaaaaa	aagagtcccc	atggtggctt	atacatgcc	atgtccctat	4842
ctgacagaaa	cggtgactga	gaatattgct	ccatctattc	ccactatcca	gtgagggtaa	4902
tgacaagaag	acaggatcac	tcagaccatg	taaatctaaa	ctgatacaag	agggcagggg	4962
ttgagttccc	ttaaagggtg	gatgccaaag	agctgtcccc	ttcctttctg	gcagggagag	5022
taaggagaca	atggccaggg	aacaccgtta	ctctaaagat	aatgtcttga	agacattctg	5082
catattatta	gttgtttctg	tgagtttctt	ttttgaaaag	caacaatagc	agccgttggt	5142
cattcatacc	ttaatgtggt	ttactgagtc	ttcctaaaac	ccaaatgaac	aatgaacctt	5202
aaggctatcc	ctttggactt	gaagaaagga	cttctattgg	aggatgaggg	tgagcagaaa	5262
gaaaagcagt	ttcacagttg	gttgttctcc	tggggaaggt	agttcagacc	attcgagggg	5322
gtagttagaa	ccatgagtgc	actatttttg	atgaacacca	ggagctaaga	gagtaacata	5382
gaggtgtgga	cagaggatta	agtctcaag	acaatagccc	cagccccatg	ggaaatcatc	5442
tttctgctca	tgattgagaa	ataatggctc	ccttggcact	tgataacctt	togaagagct	5502
ttctcctccc	tactagctgg	ttccagatca	ctcttcaccc	agtcacattc	ctctcactca	5562
cttgagctgc	ccagcctggt	ctggcactag	agacatgcac	ttggggccct	cctcaaagga	5622
agaccctgag	atattctgct	tacttctact	ctgctcctgc	ctgcagggcc	agctaaagga	5682
acttttcatg	ttttctttgc	aaggaaccct	gcctggctgg	catttttagag	acaagcaaaa	5742
ggggcaataa	cttccttgct	acaaaacagc	ttcaagtttc	catagagtga	taagggaaat	5802
gagggccaaa	agacactggt	ccccatcctg	tggcaggact	gggggcttca	ggagaaaact	5862
tggggaatgt	gtaacctctg	tgggtttgta	gcttaaaaac	actgagatcc	tgggttttct	5922
gtctttgttt	tttgcccttt	ctcttaggaa	aggagtgagc	tagggtgaca	aggggcaaca	5982
ttttttatcc	ctcattggct	ctttctacag	aggaaggatc	ttttcttcta	agataatcag	6042
cacaagacaa	tgaagatagg	cactagctcc	cagttaggta	tactaatggg	gcaaaaggaa	6102
gagcatttnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	6162
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnattttgca	ggtgagggaa	ctagaactca	6222
gaaaaggtac	ttaatttccc	caagattaca	tagttattag	gtgacaccgg	caagatttca	6282
acaaagctaa	tgtcctttct	actttactgt	gctaccatga	tgatggtaat	caaaaatggc	6342
agacaaccca	taaatcttcc	aactttggaa	taggtttttg	cactgaagtc	tgaatatqqa	6402

[illegible][illegible]

[illegible]

attatcactt	atgagggtgn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	60
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	120
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnctgcc	180
ctttatttt	tcatgaaaga	aattgctgaa	gaggactaaa	agaagtttta	gtaagcattc	240
aataaatgta	tgttctttat	agtttcctaaa	tcagcaaata	tagacatcct	gcatttttaa	300
ggagatttat	atattttatt	ggacatgctg	taatttat	aaccacttcc	ctgttggtag	360
acattatttc	cattttcttc	tgctagatta	atgcttgaaa	aaaatgtgtg	cctcctaaag	420
actgtgatga	aagttgcctc	tgaataaaac	tcaaacaaat	cattaatcat	taactctttc	480
cttacttgta	tgctctttgg	atgctctact	gtgttatcta	taaaataaag	tttgaagtga	540
aaaattaggg	taaaacattt	tatatcattt	ttaaaggata	tatacatgga	tgtacttaca	600
tatgcatgtt	taaatttata	taccataaca	tttatttctt	tttttaaaaa		650



FIG. 5B

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnct tagtgaatct aatttgcagc 1680  
 tgggcttgag aaaaaacctc ttcatagaat tgtttgcac agtgtcttga ttgcctctgt 1740  
 aacttacaat aagcaagaat gtttcaggat ttcaaaaatc tattgcattg cctaaacctc 1800  
 ttattttgta tggagtaatc aagctcaaag tttgcatgtc ttagaaactt tacttggggc 1860  
 aaaattagac caagtaacaa ttaatcttct aggtattctg agctattcag acatatgatt 1920  
 catgtttgct aattgctctt ttctcttgta aatattagct gaaaaatgtc acctgtctga 1980  
 caagtagcat attttatgcc tatcactcct ggacgcatt cttacaaggc agacaggaaa 2040  
 aataggaaga aaatggactt ttatcaaagg ccagggcagt aaagagggga gttctgctgt 2100  
 aagctaaggg gagttccaga ggaagttata ggcgttccct ttcttatgac aagaaagcat 2160  
 agtgcagtaa ataaatttgc taaatagatt caacagtctc tacccaaagt catctattta 2220  
 attcttggtg ttatgcagac tcagcaacta accttccttg taagcccat tttcttcctt 2280  
 gtttcctggt tatcaaatgt aattaaacaa gagaagtatt atagaagagt aaaagtagta 2340  
 ggtaattctt gaacttggca tatgattact acatatttga tgaatagttg aatattattc 2400  
 ttcaaggaca gattggattt ggtatcaggt ggctctgcat taagttataa gggacttaat 2460  
 aactcaagta tttaaggacg gttccatca taaagggatc tgcccttaag aggggtcccat 2520  
 tatggagatt ctgaggtgag agctattcca agtgtgcagt ggattaaaat aaaagaatca 2580  
 tacaggaaat ctctttttac atgccttatt ccagggctct tgcaacctgg cacagcaagt 2640  
 gcagatatga ttagcattgt ttacacatg tacactcacc ttatagccct gccctgtgc 2700  
 ccctcctgca caaagaatg ctgggcacac gtgaactcct ctctgtagaa aggcacatta 2760  
 atgttctagc catgggttaa acagggatag aggcaagcca aaaatgtcgg tcatttgaaa 2820  
 taaatctcaa gtttgtgcat atcactatca agtgtgctgt gtggcaatta agaatgccaa 2880  
 tttgtgtgat cacaggcaag ttgcagtttg atgaaaggaa agcagaggtg aatatataac 2940  
 cagggctcac ctttctttct cctctctct ctttctgtca tttatttgcc aagctcttaa 3000  
 ctagaacttg ctatgtgcta ggtactggat atatcaaagc aaactcagcc tgggtctttgc 3060  
 cttcaaagat ttgcaggata gtgggaagaa aaacttgaat cagaggacat ctgcagtggg 3120  
 aatcattcaa gcagcagaaa acccaaaagt tacttatact gtgaaatctg atcagagaat 3180  
 ggactgtcct ggtagtaaa atatcctgga ggataaagat tggccatgca ttccacatat 3240

FIG. 5B

[illegible]

gaattaccac	tttccaaga	attaaaacat	ggtacgaaag	aaaggnnnnn	nnnnnnnnnn	3300
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	3360
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	3420
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	3480
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnna	aacaacttct	3540
ggaatagcta	atgcttagaa	gcagctccca	aatatttgtn	nnnnnnnnnn	nnnnnnnnnn	3600
nnnnnnnnnn	nnnnnnnnnn	gcaagctcta	ctgaacataa	tttgatctaa	tcttctgtga	3660
ttattcagaa	actacttcaa	gattttccta	tacctccatc	ataatgaata	cccattcatt	3720
aatgatggaa	gcagccta	tttgtcattt	ttcacacttt	attgatgtaa	cactaccttt	3780
actagtttgg	ccactcctta	tgcttttttt	atagaactat	ttagatcaat	tcaactttta	3840
aaaaataaag	ccacataccc	ctgtggtaga	tgaaaaacaa	gtatcatttg	cactggtaaa	3900
tagagaatag	gaagaaaaat	aatgcagtg	aaaataaagc	agtgttatca	aatcctaccc	3960
agatactgtt	atctacccg	aagcttcctg	tttgattaaa	aggaaaaata	gccagtgtta	4020
gaggtgtgga	agtctagttg	aaattatatg	caattgaagg	attaaaatag	aattgaaaag	4080
ggaataaatt	cctctctgaa	taatttaact	ccctttaggc	tttgattctg	cctcatctaa	4140
aatcatctta	catacttcta	gtggcgtgtc	cctcacattt	tggtaaactc	tgnnnnnnnn	4200
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4260
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4320
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4380
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnccat	tttccctt	cctttattgt	4440
cagaaaatag	aaagcatcta	cagtgggctt	gtatgatgtg	gtgggtagaa	atacctgatc	4500
tgattnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4560
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4620
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	4680
nnaccatcac	tggtgagagg	aagtgatacc	tggcacaaaa	atatatggat	taatcaatat	4740
ggattgaggg	aaacaaacct	ggagaatagg	atgtgaaggt	atttaagtaa	catgagctca	4800
gaccttgatg	gtagggaagt	cgaaggaag	cattttgttc	ttatatgaca	gatgacctg	4860

**Table 1**

Variable	Mean	SD	Range
Age	60.7	8.9	45-78
Gender			
Male	10		
Female	10		
Marital status			
Married	10		
Single	10		
Divorced	10		
Widowed	10		
Educational level			
High school or less	10		
College	10		
Postgraduate	10		
Occupation			
Retired	10		
Unemployed	10		
Employed	10		
Housewife	10		
Student	10		
Other	10		
Health status			
Good	10		
Fair	10		
Poor	10		
Medication			
Yes	10		
No	10		
Comorbidity			
Hypertension	10		
Diabetes	10		
Asthma	10		
Heart disease	10		
Stroke	10		
Cancer	10		
Other	10		

aatgactgca	gggcttgggg	ggtcagggac	tggaggtggg	agaggcctct	gagagcaagc	4920
agtgtgtgcc	accagaagct	cttgctgggg	tgcccagaga	ggagcaaagg	gcagtcagct	4980
gcacaggagg	gaatgtttgg	aggagagagc	cacctcagat	cagcgggtca	agaatcccac	5040
tcttgcccag	atggatgggg	caaaggagaa	aaaggattcg	ccacgggaat	gtccagataa	5100
gacaggtgcc	ttttgaaaaa	tgggggtgag	atgggtctca	ggttacactt	cgtaagaact	5160
ggaatgtaaa	gtaaaggcag	acaatgacaa	aatatcttgt	tttcttttca	gct tta	5216
					Ala Leu	20
ttc aca gtg aca gtc cct aag gaa ctg tac ata ata gag cat ggc agc						5264
Phe Thr Val Thr Val Pro Lys Glu Leu Tyr Ile Ile Glu His Gly Ser						36
aat gtg acc ctg gaa tgc aac ttt gac act gga agt cat gtg aac ctt						5312
Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser His Val Asn Leu						52
gga gca ata aca gcc agt ttg caa aag gtg gaa aat gat aca tcc cca						5360
Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn Asp Thr Ser Pro						68
cac cgt gaa aga gcc act ttg ctg gag gag cag ctg ccc cta ggg aag						5408
His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu Pro Leu Gly Lys						84
gcc tcg ttc cac ata cct caa gtc caa gtg agg gac gaa gga cag tac						5456
Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp Glu Gly Gln Tyr						100
caa tgc ata atc atc tat ggg gtc gcc tgg gac tac aag tac ctg act						5504
Gln Cys Ile Ile Ile Tyr Gly Val Ala Trp Asp Tyr Lys Tyr Leu Thr						116
ctg aaa gtc aaa ggtgagtgg						5556
Leu Lys Val Lys						120
ccaacagagg	atctgcaagt	cacagaaacc	cattaaagg	agctcaagca	aaaacaagca	5616
ggctgctttt	aaggagacag	ctatttcaga	gaaaatgaaa	gcatctgctc	ggaaataatt	5676
tttgacatct	gagtacaaag	cagccgaagt	acaagtgaaa	gggggtagga	cctataggaa	5736
taaaatggga	ctggaggaag	ccaggaaaat	tagtccctga	aatgtggggag	ggtatgaaaa	5796
ataagctttg	cctaattcac	aattctccca	tggaacatcc	ctgacttgat	tattaagata	5856
ctcttttttca	atagtttata	ccttgaatcc	agagttttta	aaaccatggg	ttgccgcccc	5916
ttcatggatt	aaaatatcaa	tttagtgagt	agcaaccaga	tgcacgtttc	ccgcccttta	5976
aaaaataatg	tatagaagag	aatagacaga	gtagatcaga	cgatatcaca	gagtaggact	6036
gagtactgta	aaactaattt	ctgagggacg	tgtgtgtgtg	tgtgcgtggt	gggtcatggg	6096
ataaattttt	tttttcttac	tttgatcat	aaaaagttac	aagtttgga	aacactqctc	6156

# FIG. 5E

aaatgcaagn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6216  
 nnnnnnnnaga gtcccatgaa gtctatagct gtcctattc ctctggattc agggatctct 6276  
 ccaactccagc acaattgaaa atctaaatat aaagagaatc ttcacactct tgtttgttct 6336  
 agaaaaggtg atttgaggaa agacataata caactataaa aaatagattt tgcttggtca 6396  
 ttggcttatg gtctccaggc ttgaatgctc tgagataaat gatgccataa tttctctggc 6456  
 ctcttcccat cccacgcatt ggacctcaga tggctctgtac tgtcttctag agggtttgtg 6516  
 ggttttggcc ccaaaaaacc attaaccttg gcagaaagtg tgtgacttta tgatctggta 6576  
 caaagaagga caaactagag ggactggaca tgaggatgaa tattgtgttc gcccttatnn 6636  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6696  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6756  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnaaa gacctcagt 6816  
 tgttacaggg gcagtgcct cctcacacct caaccatcaa tgagtcacca ggaaagccat 6876  
 tagcctagat gtaactgttt tctatcttta ttgcatttcc tacatccagg cagcagctgg 6936  
 gaggaactct agaacactga agtttgtctg agttccctta atgtaaggct gtacattctc 6996  
 aggatgcctt gatgtactcg aatatctgca accctaaatc accacctctg tttttattga 7056  
 tctctatctg aatgctgtat taatgggcca ggccttctgc ccattctctc aaactgagaa 7116  
 ctgtctctca ttcttgggga ggcaccctgc ctactcctta cctagatcag ggatttctca 7176  
 gttgtggaga gatttgttcc ttatagtgtt ggtcatcaaa ctgggatatt tggggattac 7236  
 aaagactttt caagggatgt atgggcacag gcagttttag gaagtgagtt cctagatcct 7296  
 catcttcccc aaatactcgt tcccaaaatt gacgagcctg acaatgtgca tgccaggcaa 7356  
 ggctcttggg gttcccctaa aacacttcct cttttaagcc taccactcac tcatcatgaa 7416  
 tatagtccat tgtcccaggg tgtaaaaccc tctatagtgt taaataaaag aatgattggg 7476  
 aacattgaca cctgatggaa ctgttatgac taaaaaccct tttgcaaata atgtggtatc 7536  
 taattttctg ctttcaacaa aattgaagga ggccttata aagttaataa ctgataatca 7596  
 aaaatgagta atttttgcc tgaatatcag gtcaaagaat gaaatggcat tgctgtaacg 7656  
 aaactgcttc cattcccatt gatttactca tacgaacaag attccttagc ctttataagc 7716  
 tacaaaaaaa tgaaaaatag aaatagaatt gaggctgaat tctattatat aaaatcattc 7776

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FIG. 5F

caaccatgtc atatggttct tcggattcat gaataatttg gaaaagagag ccatatccat 7836  
 cttattaagg gacacattcc caataaattt tcatctttca tgtttaataa ttatcaatat 7896  
 tcataacatt ttacattttg atcaaataat tgtaataat aatagaaatn nnnnnnnnnn 7956  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8016  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8076  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8196  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8256  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8316  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnattag atcttaatgc agaacaccct 8376  
 gaacatttaa agcttcatag tcacaagaga aaagttttca tttcaatagc tataaatatt 8436  
 ttgttgttgt aaagacatat aacgataatc aatacaaaat ctgtcaaaca aaaatatgtt 8496  
 acattaagat aaaattctgt agggaaggtg aaattggaag tgagtttcaa tgaatgaaaa 8556  
 gaaacaattt agacagagaa gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnncttagaa 8616  
 ggaattgaat agattaggtt ccttacccaa aaagcctctg ttatttgtct tatttattta 8676  
 ttctcttttt tccacattct ccagtctcat tccccttttt taacacagga aattattcca 8736  
 gcatgtttca tacatattct tttgtttgta agagcttatt taaaatatgt aatattgttt 8796  
 tagatgcata tatttttttt cttgtggaaa ctatattgta ctatatatat atattttaga 8856  
 aatggacaca ttannnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8916  
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# FIG. 6A

tagatctcag ctttcttgag gcaggagagcc atatctgttt aattcactca gcatatactg 60  
 caaagaagca gnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnta 120  
 gggagaagtg cagaataaat atacccaact ctttactatg tatagacatt atctaggtct 180  
 ttatTTTTTTT tctcttctta atctcaaaga aaacagagga aaggaggaag taaaaagtaa 240  
 atttttgcct gaagatgttt ggaaaaaata ccaaataaag tgagatagtg ggtaatctag 300  
 tgatTTTTTat ttttccgtcc tctttctggc ctccaattgt gaaataatTTT atagcactgt 360  
 aagaaagaag ccacaaattg tggtagcttg gaccactgtt gaggnnnnnnn nnnnnnnnnnn 420  
 nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 480  
 nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 540  
 nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 600  
 nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn acttaatatT gatagtgata attttattca 660  
 tttcacatgg catgaagtac caagctctat aggaatcaga aaataaagtc ttatTTTcttt 720  
 ttcttctctta ttgtcca gct tcc tac agg aaa ata aac act cac atc cta 770  
 Ala Ser Tyr Arg Lys Ile Asn Thr His Ile Leu 131  
 aag gtt cca gaa aca gat gag gta gag ctc acc tgc cag gct aca ggt 818  
 Lys Val Pro Glu Thr Asp Glu Val Glu Leu Thr Cys Gln Ala Thr Gly 147  
 tat cct ctg gca gaa gta tcc tgg cca aac gtc agc gtt cct gcc aac 866  
 Tyr Pro Leu Ala Glu Val Ser Trp Pro Asn Val Ser Val Pro Ala Asn 163  
 acc agc cac tcc agg acc cct gaa ggc ctc tac cag gtc acc agt gtt 914  
 Thr Ser His Ser Arg Thr Pro Glu Gly Leu Tyr Gln Val Thr Ser Val 179  
 ctg cgc cta aag cca ccc cct ggc aga aac ttc agc tgt gtg ttc tgg 962  
 Leu Arg Leu Lys Pro Pro Pro Gly Arg Asn Phe Ser Cys Val Phe Trp 195  
 aat act cac gtg agg gaa ctt act ttg gcc agc att gac ctt caa agt 1010  
 Asn Thr His Val Arg Glu Leu Thr Leu Ala Ser Ile Asp Leu Gln Ser 211  
 aagagctgcc ccacttcct aggtctatca gttagggttc agacaagaaa cagatggcat 1070  
 actcgagtga tttgaggaga gtgtaataaaa gggactgttt acaaaggtgt gatcaccatt 1130  
 tggagaaact acaaaggata gtgcagaaca ctggggcttc aatgttgga gggcaattac 1190  
 cactgttgga gaagttactg gaatcagaag ggagctgtag ggaaagcccc acttcccagg 1250  
 agctgtagcc acagaatagg gaagctgcca catgcagcga ctccaaaggg tggaaactgg 1310  
 atgaatgaat accccaactc attctcctcc caccctccaa tctcctgcta gcacctccca 1370

## FIG. 6B

ttggctgaac ccagctagaa gtcagagaat acaagggtcc actgttgtat tccataaaaag 1430  
tcaacttctc agggctcaga gcaatattga catgtacaga atagatctgg agaggaaaca 1490  
gaaaatatct agtacaatag ctaatcactg tgattcatgc acagtgtcat gagccagcag 1550  
gatgaatatt cctttgctgt acttgctgcc agtcagctgg ttatggggtt ttccaagaaa 1610  
tttggctctc aacaaaattc ttcagagcct ttactgacta tgctggatat ttttgaagg 1670  
gatcccatc ttttgaactt catacagcag aatttcaaac aatcttggga aaataacaac 1730  
ttttatctgc ccagtaagga caactaacac ctagtatcat aatcatttcg taagagacag 1790  
gtaatttcac caccgagtgc atat 1814

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FIG. 7A

ctactgagaa gggatatact ctcagactaa aggacagtcc ctagtactga ttcaatctgg 60  
ctttatagaa aattcactat attgtcattg tatttcacag tttgcccttt gtcttagctg 120  
gtaagacaga gcctatgata aggacttgtg tggcatgcag gtatttaatt ggcaacccca 180  
gagggcagaa gcaagagatt taggagttta agagagggta atataagagt atattatcaa 240  
agttgtagtg tggacaacag aaactcaa atccaaggac cagcatgtag acagcctcct 300  
aagatgtcta ctcagacaaa gaatttcagg tggaggact tgttcactctg cttcacgccc 360  
attggttgac aggaatatga actccattct gctgctgggc tagacatgca tgtgggctga 420  
gtgagctttc ccagtatcc gtagcatcag aaaagtcgca gggcagaaag aaaagtatcc 480  
aatttgaggt gaattactga ccttgaagtg agtgtaagcc taactagaat tctaccccag 540  
ctggctgaag tgaaagggtga ggctgagagg aaataaggca ggactgcaca gtccccaatt 600  
gtactgttca aatccactca tgccttcat taagtcagct ctgccactga gccttcacgc 660  
tgaggaggcag ccacaatctc tgcagaagat ttaatatata ccagtttgtg gaacaagctg 720  
tnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 780  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 840  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 900  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 960  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1020  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1080  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1140  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1200  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1260  
nnnnnnnnnn nnnnnnnacc tgcagcactg ggatagccct ggtacagacg tagaacatgc 1320  
ttgaggaggt tgtcaggagg aaatgagtta gaccttgac agaaactacca ccatcaagta 1380  
cagttggggt gaggcagaca tggatgagt tgaggcatca gagatatctg atgttttatg 1440  
ccaaattaaa attaatTTTT tcatggagt acactgatcc acagaccaga ctccaagaac 1500  
tttgagtgta ctaaataccc atctcatcat aactttcctg gtattttctt ctggaaaaaa 1560  
ttcttcctg atacagtttt cagaggcagc tagatgcact gtcactctc ccttttccc 1620

FIG. 7A

FIG. 7B

acttcctac ctatccacaa ttactaccc aatgccaaca cttaaagttag cccaacttcc 1680  
 ttctaactaa attattagtt tagaaggaaa gagaggagtc atgctaagga tcttaactgn 1740  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1800  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1860  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 1920  
 nnnnggggag aggaggggag aggaggtagg gaggggaaag aaagaaacta gaaatccatc 1980  
 aatttttagga ccaacttcag gtaaaaaaat gaattaggca agttggtcct tcaacattct 2040  
 ctacctctct ttatatcatg gttgagacca cagacttctc acctcatgaa agatgaactc 2100  
 taactaattc atactaaagc taaagcctct aaagaggatt aaatatgagc aatcccacga 2160  
 gaactttttt cccctggaat tgtttattca actgtcgttc gttatatgga atttctctgcc 2220  
 tggttaagt taggccagta ctttgatga attgtagttt tctagaaaga cgcttcttat 2280  
 ataagaacct ctccaggga acaggggcct gtatgagatg aattgagaaa taactttaca 2340  
 ccaactgatta tgtcagtgtt ctattctgca tggtagagat gtgaaagggc agactgacca 2400  
 ttgctctgga agcctttacg ctgtgagaag ttaacagtgg agtaaaatgg ccaactccact 2460  
 ctcttcatgg aagccaacat ggcttactaa atagtcaaca accatgggag agacctgtgg 2520  
 ggtcttcac cagactcagg atctcctagg gtatcactca taaatacagc catcagggag 2580  
 atggagaaat ctttgtgcag ccagaaattc tcaacctggg ttaccatc cttcccaact 2640  
 ttgtattcgt cctactgttt actgacatgg atcctctgct tcattaacca tcccttctc 2700  
 accacatgct ctctgaactt ggctgcacct ttctacctc catgccttct ttgctcaggt 2760  
 tttccacat aaatatcatt atttccctct ctactagctc caagcccacc ctctctctgg 2820  
 ggcagctcag tcaactccagg gcacaagggg gtctttccct catcccacat ttgagacct 2880  
 actacctgga ccatttggtt gccttgtaac tatgcttgcc tttttaattg ctattttatt 2940  
 ttccatgtat ttccattgtt cacacaagtc ttctttattc cacactaagg caaaagcaga 3000  
 gtcctgtgtt cataataagt gctcaacaaa tgttggttg attgggttg agattccatc 3060  
 ttagataatc gcagtcccat catgccagct accagactgt gtggacagcc aggtcagagc 3120  
 agccaaatga tattctagct tgtggcacia ataccagcaa caaaataacc aaagtcacac 3180  
 atctgcctct gagttcctgg ctctatttct tcaaggcat ttttaagttg tcttatgact 3240

FIG. 7B

# FIG. 7C

gttccctttc tactcattct cataaattga gctgtggact gctgtgaccc acaagcttct 3300  
 ccggaagtca atgtataaaa caaacacgga aacgaagagt atggtgggtg gaggggtactc 3360  
 cactgactct agaatggatg actgaacatt ccaaatttca agcacaagtt agggagcaac 3420  
 agatcatttt ccttttgaaa tagggtttct tctgctcagc cagttgttgt attttcatta 3480  
 ggaaatggaa tgggactaca gcacaaaaaa taaatataaa aggacccttg tagggctggc 3540  
 agaaaagaga atccttccta ggagacctgg aggtgattcc aggcnnnnnn nnnnnnnnnn 3600  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3660  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3720  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3780  
 nnntcagaaa gtgtgcaaac agtaaaaaaa aatggtatat ctagcaagtt gcatgcctta 3840  
 cttgtgagtt catgaagttg tggcaaggat aagacaaata ttttttgcca ttgcatcatt 3900  
 atatcattgc taagagtatg ccattattnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 3960  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4020  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4080  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4140  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 4200  
 nnnnnnnnnn nnnnnnnnnn nnnttaatt aattaaatta aagaaacgac aaaagagtat 4260  
 gcaagaattt taaaacaact tagaggaata tgtatgagga tacaggctaa gctaccataa 4320  
 tgaagagacc tcgaaataca gtgagaagcg agacagaagt atctttcgtt ccatgtaaca 4380  
 ctcaggtggt tcagagcagc taagcagcta tgttccatag agtcattcag tgatccagat 4440  
 tattttcatc tgttgctctg ccattctcca ggatgttgtc cctataaaat tgtcaaagct 4500  
 cagtcagtgc caaaccocatg tttcaacctt cagaaagtaa acgagtgggt gaaaacacat 4560  
 tcaatgtttt aaggccaaga ccttgaaaac tactctctt agcctgaact tagattacat 4620  
 ggctgggccc acttaactat aggggaggct tggaaacata gtctctgaga agccatgtgt 4680  
 ccagctaatt ccctaatact aaagttgaaa gaaagaatgg attaaccagc agtataccac 4740  
 aaghtaacia atgactagga ggatcaggct aggtggacta gaaaagagac agtcaattca 4800  
 gtgcaacaat tccatattga cacttttcat gtagctgttg cttggctcta tctagagagg 4860

FIG. 7C

FIG. 7D

actcagaggt agttagata aggcctttgc cctccaaata cagtctaagc agactgattt 4920  
cctactggat gttcaacttt ggagtcttca gggatgagta gggcttctgt acgtggaaga 4980  
gactatgagg gaacctgcac aggacaaggg tttgcataaa gacactgagg tagggacctc 5040  
tctgtttgtg gggacagtga gaggcccagg tctccttgac tcacaaagtg cttactaagc 5100  
acttactaga aattaagaag cagattataa tcaatatggg ttatccaatg tttggatgag 5160  
caaggctcct tatcttttct tcgttaatgt taatcacact cttttggatg gagacaaata 5220  
tctgtggggg ctntnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 5280  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 5340  
nnnnnnnnnn nnggctcaga cttaaataatg tctaattctt tctccagtaa aacaatccgt 5400  
ggttctcaga tagcactgtg ctggaggtag tggggtttga gggctgggaa gttgggagga 5460  
ctgagccctt cccgctgagc agtttcgtcc agtttttctt gtaccagcct gtcagtgtta 5520  
ttccatgtga atgactccag aggcaaaatt caagcttttg aatagggcac aaattaactt 5580  
gagtaccctt tcatttccct gtaggtgaac actcctctag ccctgccttt tgtcagtctg 5640  
gagcccttgt tctaattctgt acacaccaga ggactttaca aggctttccc cagcctccag 5700  
aattattctt ctgatccacc ctctactaaa ctcacccttt cctcagtgtt aggacgttga 5760  
aaaaccgaaa caaggcaaag ggccaattgt aataattcac actaaggcat gagtgactag 5820  
gtttagtata ttaacactac ctaggatatt ctatttcttc caaaaggatc ctgttaatcc 5880  
ttgaaattta acaactaatg gtatagattc taagcactgt gagtacttgt cagtggggga 5940  
aagacatttt tgggctgaga gactttgcca ctgnnnnnnn nnnnnnnnnn nnnnnnnnnn 6000  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn aagaaagatg attagatnnn nnnnnnnnnn 6060  
nnnnnnnnnn nnnaaaaaat aacatgagag nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6120  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6180  
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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 6300  
nnnnnnncaca gagctagccg tgttggtgtg caccactca tgtggccagc ctgttggtct 6360  
acctcttagt tgccatgtaa caggattctg gtgcttttcc tttgcccagg t cag atg 6417  
Gln Met 213

6417 Gln Met 213

[illegible]

gaa ccc agg acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc	6465
Glu Pro Arg Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser	229
tgc atc att gct ttc att ttc ata gcc aca gtg ata gcc cta aga aaa	6513
Cys Ile Ile Ala Phe Ile Phe Ile Ala Thr Val Ile Ala Leu Arg Lys	245
caa ctc tgt caa aag ctg tat tct tca aaa ggtaagtgag tttttattcat	6563
Gln Leu Cys Gln Lys Leu Tyr Ser Ser Lys	255
ggtaaccccaa tgcactgggt gtctgcagca tgagccactg ctttgactg caggcctatg	6623
gcttgctgct ttcatgctaa acccactcag agcttatgaa ccactttgag cttgtcttga	6683
tgattatttt tccccagaag aaaatggctc tcatcgtcag tgagctgaac ttcttacact	6743
gagttttttta aagggaatgt tttgttctta tgtctgaaag agtttgtctt attctttgag	6803
ccaagagctt tcatcagcct catgagagtg atgttatttt ggcaatgcag agagctacgt	6863
gctccgattt tgctgggtggg aggttgccag gatcctttct gaggattcct tccattttca	6923
cccctctttt ccccagctctg gatatgacct ggggttaaacc caccctctct cccaggaatc	6983
tcaacctcac gggtgggtaa ggaaaggaga aaggtttgtg aggccatttg gggataagga	7043
aacagctggg tggtgggtgca ttaacgtctt tcagcagctc ccttcgagtt tctccttagc	7103
ctgttgattt cttaccaaca cactcctggt ctgttgtagc agctgggaca gagcatgctg	7163
aagcctttca gccctgattt cattgcttca ttgttcattg gtctgtcttt ggtttcctgg	7223
gtggagcctg cccacaaaac ccccagaatg tatgcaggcc tagctgggtgc tttcctaaac	7283
ggctcccttg tctgcactca atgaacttct ccaaagatct atacatggcc tcattctatag	7343
aaagagaaat gacatgtgga aataattcag taggagtttg cagcagcact atctgaggac	7403
taggggaatt ttaagtgggt gttatcttac atttatactc ataacttcta tattttcatc	7463
tgccataaaa tattgtcatg ttctatttgt ccattgccct atgtgtgtat gtattcactt	7523
gggtgctgac cacaatatth ctaactgtag aatgcaagga attgttgcca aannnnnnnn	7583
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn	7643
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnncttca tggtaaagga	7703
ggaggtatgt ccaacagaac ttcgactttt aaatagaacc acttcagaga gttgtgtcag	7763
gtgcacctca gttgtcttat cttctgccat tcttctttta cctctcacac ccatacctca	7823
gggttcaagg cctggggcct gaggactcct taataacttc agaaatgagc agctgagtgt	7883



FIG. 7F

tccgttccag ctgtctttgg gagaatggaa tggagtcaca ctcaaagata gagtggaaat 7943  
 aaatcctctc ctcatccttc accccaatct taagagttag tgaggatata agtagctccg 8003  
 agctgggagg taaagctcaa gttctaactg tgattaggag acctttctta caaataagaa 8063  
 ttaagtgaat aaatgtgcaa acaatttctt ttatatTTTT aatgaaccag agagaaatca 8123  
 tggttgccta tataaccctt gtctccaact cacttgcatt cagatctgct ttcttacatg 8183  
 tgtctgccat gcacacaaac ttgtgtgcca tggaaaaggg ttgagaactg ctggtgatgc 8243  
 agacagagct ttaaannnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8303  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 8363  
 nnnnngcagc aagagaagga acattttaca gcttattggc cgaacttcac tgccgctagt 8423  
 gtggttcaac ttggactaca gagaaatctt cctaactggg ttccctgtat tcactcctgc 8483  
 tacctccaac ttggtctgtt ctcaactttt gctataatag gcttttaaaa atcataaatc 8543  
 taccatgtgt cctctgtcca gaccttctcc atggcttctt attgctcact ggatgaagtt 8603  
 ccaacgagcc caggatgggt tgactcatgt ctccagcttt aactgcatca ccatcacctt 8663  
 cattgtctaa agctctaacc acacaggatt ttctagtcct cagaggcatg gcagtctttc 8723  
 aattccgagt tttctcatac aatattgtct cttcttaaaa tattttttct tgtgtccac 8783  
 ctgagttgga gtcacttttt aaatctcagc taagcttata cttcatcaag tctttcctaa 8843  
 ttctacctcc acgcaccaca ccattacat taaatccctt tattatatgt ttccatagca 8903  
 cctactttct tcttttcagt atactcagca cacaatcaca tgtctaggat ctgttttaaat 8963  
 agcttggact accaattaaa ttgcatccct tttaattgtc cattgattcc tcaagtaccc 9023  
 acatgcccac cttagcaaga agttcagtggt ctccctctta tagcatgtac ttctccacct 9083  
 cccacaaact gccagaaagc ttacttagcc cacagggcca gtgctaggca gctagggttag 9143  
 tcctccagag ggccctgggt ttgagcagtt gctgtctact ccggccatgc agaatctctg 9203  
 gtcttccag atgtctccat ccactgtgca aaggtaacct tgctggttcc gatccccaca 9263  
 cagaccacag tgctacaaga ttacagttct tatgggtccc caacacatgc tctgtcattg 9323  
 gtcccaaagc aggaccctta tgggttgatg aggtaggagg aggtccctgc cttagccaca 9383  
 gctgcacaca gccagcctct tcccttctag gccctcatgt tgagcctggg acgccagtcc 9443  
 taacttctt ctcttcagtt cctcttaggg ccattgggtat cctgaatttc ttagtccatt 9503

FIG. 7F "99999999"

# FIG. 7G

gcaaagttaa gtaaagaagc agcaggett gtcctttcc ttccagatgg cttcttagct 9563  
 cctgaacaga tttaccacc tatacctcag tgactagctc tgtgtactaa agtgtattgg 9623  
 gagggcagcc attattggtc cataaaaggt cctgcttacc attttcccct aagaggaacc 9683  
 attcaacagt ttggggctcg agggtgacct gctgggctct agagaagaag ctggcaactt 9743  
 ctgttgcaaa ataatgttaa attctgcttc atctgcttgt cttnnnnnnn nnnnnnnnnn 9803  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 9863  
 nnnnnnnnnn nnnnnnnnnn nntaaacatt gaacctacta tatgcaggtg agtatgctag 9923  
 atnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 9983  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 10043  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 10103  
 nnnnnntgn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 10163  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 10223  
 nnnnnnnnnn nnnnnnnnga tttgaataca ggtctgtttg actccaaaac ttgtggccta 10283  
 tttgttgcaa aagtgcctta tacaattgg ttcagtcaat attattatct ttgaacaatg 10343  
 gaaggagaaa gtaagtttca atccaaaata attgagtgac ttatacattg acttgctgag 10403  
 ccaatggcaa agtcaagtta gaatccagca gaagtcacca gctacagaat ctagatcttt 10463  
 agaacatgtc ttcagatctt cagaacagtg tttcttaaac tctcttgtga aggaacagtt 10523  
 atcatcatag gctggtaaca gttcacctac cagcaccagc ccatgaacca gactctaagt 10583  
 ggcacagccc tagaagattg agccagaatt ttacagaggt ttaaagacca aatatgctgg 10643  
 tttatggta cctgtggccc acagagaatg gcagcactaa cctcaggcat aaatgaggta 10703  
 cccactgaag ccaacattca agagcaattc ctatgggtta accattgggc tcctttcaaa 10763  
 tgcaaaccct catgaaagag actacagtgc tgaatagaga cctccaaatt ccaggccaag 10823  
 ctcaggatag tcatgaggga attactaaaa acctggtata tagggcaaaa gcagaattag 10883  
 gaatggactg atttcaggaa cccaggcaat ggcaggagtt gggcattaaa tcctaaaaga 10943  
 gaatcagagt gggagggaat atgtgaaatc agaggttaag aaaaaagtga aaacctnnnn 11003  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 11063  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 11123

11123  
 11063  
 11003  
 10943  
 10883  
 10823  
 10763  
 10703  
 10643  
 10583  
 10523  
 10463  
 10403  
 10343  
 10283  
 10223  
 10163  
 10103  
 10043  
 9983  
 9923  
 9863  
 9803  
 9743  
 9683  
 9623  
 9563

$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$

[illegible]

FIG. 7I

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 12723  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 12783  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 12843  
 nggcaccaag agatgagggg ggcagtcttg gccatatatt tggctgaagt aagtcaattt 12903  
 gtcattcctg catgagcctt tataaacaga agtaagtaac caactactat ttggtcattg 12963  
 gagttgtcca agaggccagg gttctgtcta atacctgttc atgcatgaac atgccaacct 13023  
 agattgcatg cagactacca gttttgggtt tttgtttagt tcagcaggat ttttctcagc 13083  
 tctactgcctc tcaaactttc agcaacaaaa ggacatctgt gatatcagaa tctaccactc 13143  
 taagtatttg gatgcaatag caatgaatat ctgagtaaatt ctaggtgggg agtgggggca 13203  
 ccctgtagcc aaaatgattt aacaaaatca aacaaaatt ttggaaatga tgccttggtg 13263  
 caatgaagag actacttgag gtaggtttga cttatctaatt atcttatttt ctttaccat 13323  
 acctaattgag gaatttaaatt atttctagat agctttggaa aggtccctta aagaggcacc 13383  
 agcataccac tgccagatct aatccccca aacactgttt tcatcatcat catgtcatct 13443  
 cttgtctcta tagatcatat caaatccttc ccagagtttt tcaggccttt tgacaactag 13503  
 ccacatttca ctaagccaac tcatctacca ctcttcaaca aaacttttcc tcaagttgag 13563  
 ctgtccacc aacaccactg ccatgagctc attcccactt ctgtggcttt gtcattgttg 13623  
 gttatttttt tggagtgtcc tccctattcc ttcttacttg tcccaatccc aacttttggc 13683  
 atggtctact ttaagataca gtaatgagta actttannnn nnnnnnnnnn nnnnnnnnnn 13743  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 13803  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 13863  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 13923  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 13983  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 14043  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 14103  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 14163  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 14223  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nntacataca 14283

12723  
 12783  
 12843  
 12903  
 12963  
 13023  
 13083  
 13143  
 13203  
 13263  
 13323  
 13383  
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 13503  
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 13803  
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 14163  
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# FIG. 7J

caacactctc ttgcttaatc tgtaagactc tctccccac tcataccttt ttatTTTTcc 14343  
 tctgcattgt acacacaatc tataccactc ttaagcacat gattacagcg ttatTTTTctg 14403  
 gctgcttcta tgtgtctata ttttaggtcc acctggtcaa tataataaag tgggatatta 14463  
 gtgttaatgc aactatatgg tatttgatat ttgtctttct gtccgtttat caatgtttct 14523  
 tatagnnnnn nnnnnnnnnn nnnnnnnngg tgtctgattt tgaccaaatt tgactaaata 14583  
 cnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnngt tgagtctatc aactcaaaaa 14643  
 agaataacct acaacaataa caagtttcag aacatTTTT aaattactga ttttatgagn 14703  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnngaatt ccattgccta 14763  
 gaaattgcc tgggtaagat tttaatattg ctcaggccca gacagctcag ggctttgaca 14823  
 ttcccacacc cattctctgc catccagtt ctatctcatc ccaaaccat ccattatgag 14883  
 gagagtgtac agctctaggg tgcccgagg ccatcccgca ctctcatttt gtgactcggc 14943  
 atcttgggag atggagtctt gggacttagc ctggacatgt cccttgcatg tacttcttac 15003  
 aagactttta ttcagatgaa tattttccct tccaacttaa gaagcacagg gcttgctggt 15063  
 tttgcttcac taaccagcaa ctgaagcaag acctgacttg tgaaaatgcc taatagagtt 15123  
 cagtattagc gctgtttcac catttcctgg atctcttgcc tttgtgcaca tgatagaatt 15183  
 gcacttctct gtgattaatt tgtagttaag tgtggatcatg taactcgctt tgggcaatta 15243  
 aatgtaagca taagtgatgc gtgttatttc tgggtagaag atgtaagagt tggcatatgc 15303  
 tttgccatat tttctttatc catctggcat ggtaaccagt aacattctag gtagtaattg 15363  
 ctccatcagt ctcagtctct gagtgactaa aattgacaga gtccctgct gacctcaat 15423  
 gtacatggaa catgaacaag aataagcttt tgttttttat attgagattt tggagttggt 15483  
 tgttcctaca gcattaccta gtttactcta atacaacatg gaaaaaactg gaacctataa 15543  
 taaatagacc ctacgttgcc atttaaactt ctagttctga ggaataataa tgtggggaaa 15603  
 tactttctat ataataaaaa aatagaaaat tgcaaaataa aaatatactt atgtatcatt 15663  
 catgtcctat taaaaatggt atttatagac tcaccatatt cccttcctcc agaaaaatag 15723  
 aagtaaaaat atgaaaatgc ctgtaatcat gtttttggtat tatggaatca agtattgctt 15783  
 ttactttta tgttttctga attttgttg tacttacta catttttgag tgccctgatg 15843  
 tattactttc aaaaagaaga agaatacttt ctgaagccat ttcaaccatc cccactcacc 15903

15903  
 15843  
 15783  
 15723  
 15663  
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 15543  
 15483  
 15423  
 15363  
 15303  
 15243  
 15183  
 15123  
 15063  
 15003  
 14943  
 14883  
 14823  
 14763  
 14703  
 14643  
 14583  
 14523  
 14463  
 14403  
 14343

FIG. 7K

tctctagatc ccagtaacca aatacattat ataggactct tcatcagtcc ttatcaagtt 15963  
taggaagggc gatgctatac cttctttaaa ggacacctac caatgtctta gttgcctttc 16023  
aaagactcct agcacagcta aatgtgatgg atatgctcta aggatataag agctgaagtg 16083  
acttgcataa ggtcatatca taacttactg ttagaaatgg agctagaact cagaccact 16143  
gagtccttgt ctgtgacaca ctgccctttc catttgtgga agttgttctt gtatctaact 16203  
ttatctgtgc tactatttgg gcctagccat tctccctctt atgcagacaa gcagataaac 16263  
agtaaaactt taggagtgga ttatgatacc atagatatat atcatctatc ctttacaaaa 16323  
tagttattac agtcatcaag ccttgggttag agtttacaga ccatgtatcc tagctannnn 16383  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnntgaaaca 16443  
gtagcagacc aaaagaagtc atgattccca gcatagtgtc nnnnnnnnnn nnnnnnnnnn 16503  
nnnnnnnnnn nnnnaaacct gtattaagtt tctgttattt gcaagaccct gtcagttagg 16563  
ccatgtggga actagaagga tgaatttata agtcatccaa gattcttaca attaagtatt 16623  
accgataagg tactcaagaa acagttctca ttcacataat ttgggttaaa acaaaaagaa 16683  
gccagctttc tatatacttt tgggtccagtc tttacgtttt ttgttttgtt ttgtttgttt 16743  
tcatgagtat cccgacttcc ttctaagaac ttccacctga gaactgacca cagcgtcagc 16803  
attccacatg ggtgtgtttc ctttccctt tcccatttca gtggtttcca atttcttttt 16863  
cttttggcac tataaacctt tcgcaaagga aatattagac agaactccta catgtcaagc 16923  
aaattaaaat agtggtgaaa ttagagtgga ggacataatc accctatcat ataggctatt 16983  
tgtccatata atatttgtcc ctacaaaggc ctctaaggnn nnnnnnnnnn nnnnnnnnnn 17043  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17103  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17163  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17223  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17283  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 17343  
nnnnnnnnnn nnnnnnnnnn nnctctaag ataccttgtg cttcttgga catatttga 17403  
aatcatgta gctctcaaat tatccctatg tctgaagcc caccttacca tcaatctca 17463  
gaaataccca acccatgtca ggcaacttca cactttcttt cttcaggcag cacagttgtc 17523

# FIG. 7L

tcagggaggg aggagagtgc tattagcaag aggagtcact aacagcttca ctcacctgtg 17583  
 cccatgaatt tttaatggtg tgaaaagtct gtgtatTTTT tatggttctc tatggctcat 17643  
 ataagaggga caaacaatac atgaaagttc agagatgggg acaaatatca ctttaagctg 17703  
 gggataatca gggaagaaga aagttttcat ggagaagggtg acttttgaat caggaagaaa 17763  
 tggaacagc aaactcttct agatagagga gacactaaca ggaaaggcag agaggcagga 17823  
 aggtgtggga aagtgcacgt gaccccgttc agagagaaaag ccaggtgtga gataaggggg 17883  
 aaagactggt agggcatgta ttgtaaacca ctaattccag gcaaaagtta gattttactt 17943  
 actaagcaag agtgcttcag ttagatccta gcaggaaatg gagggtatgc ttagaagagg 18003  
 taactgaggc aagtttaatt tataaagggtg tgtgcagcat taagggaac cagcaaggga 18063  
 tactgagcat gccaggatgc aagagcaggc aggaagggtg actattccta ggtctgaagg 18123  
 agaaagggga gggagcagtt ccagaaccc tagtaaaaat ggcaatgaga aaggtccatc 18183  
 tggcaggacc tatggtcttt aacagaggga caaagtcaac ccacaacttg tctgggaggt 18243  
 tgctgaggaa tagatacccc aacctctctc tcaaccact gcaacactct ttttccccta 18303  
 gactgagccc agtcaaagac agaggggagga gccagtgat gcagtctgca atgtcatcat 18363  
 cctggagcat gaatagagtg cagcagggtg aataatgagt ctgcaggaat taatagaaat 18423  
 atctgacaca atagggaact ataagaggtt ttgaatagga gaggcccctg aaatgtgctc 18483  
 caatattact gaactatgtg tggcccaaag aatggaagag gaacagctct tgcaataggt 18543  
 ctgaggagag aagctgaaga cttggactag ggcaatggta aaaactgtgg aaagaagttt 18603  
 taaatgaaaa gttttaaac atgcggttc cagctagatg aactttttta aaaaaattag 18663  
 ttctcactc aaattttggg gaggttatat attttctaata cataaaaaat gatttttctt 18723  
 atttgtgggc ttttctcccc ag atc tga acctgtggtc ttgggagcca gggtgacctg 18781  
 Ile 273  
 atatgacatc taaagaagct tctggactct gaacaagaat tcggtggcct gcagagcttg 18841  
 ccatttgac ttttcaaag ctttggtatg acccagcact ttaatctgaa acctgcaaca 18901  
 agactagcca acacctggcc atgaaacttg ccccttcact gatctggact cacctctgga 18961  
 gcctatggct ttaagcaagc actactgcac ttacagaat taccactg gatcctggac 19021  
 ccacagaatt ccttcaggat ccttcttgct gccagactga aagcaaaagg aattatttcc 19081

T  
O  
O  
T  
A  
L  
S  
E  
Q  
U  
E  
N  
C  
E  
S

# FIG. 7M

cctcaagttt tctaagtgat ttccaaaagc agaggtgtgt ggaaatttcc agtaacagaa 19141  
acagatgggt tgccaataga gttatTTTTT atctatagct tcctctgggt actagaagag 19201  
gctattgaga ctatga 19217

70327 335559



FIG. 8

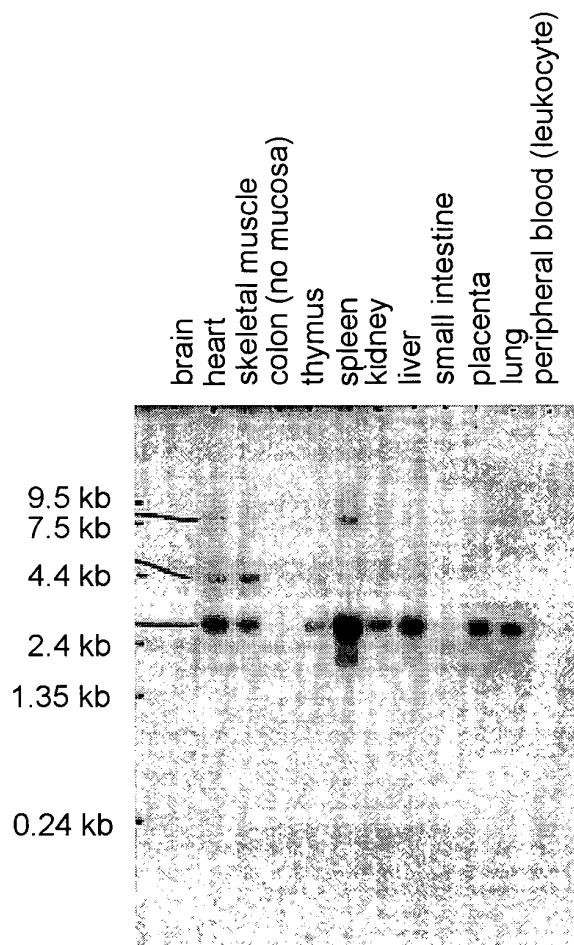


FIG. 9

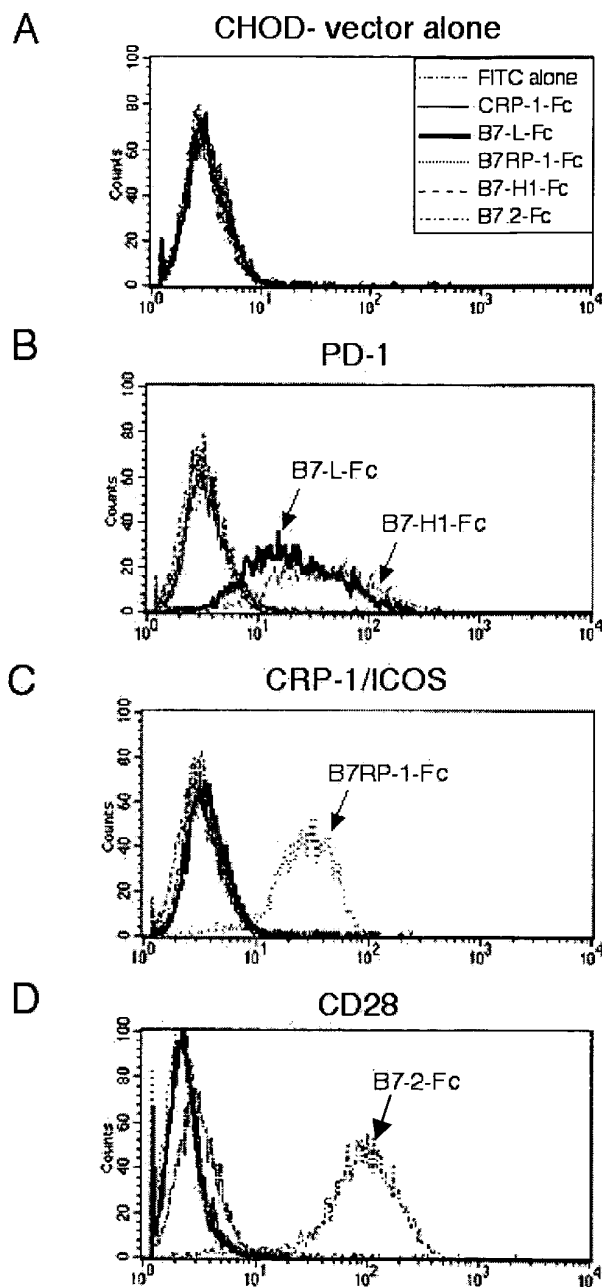


FIG. 10

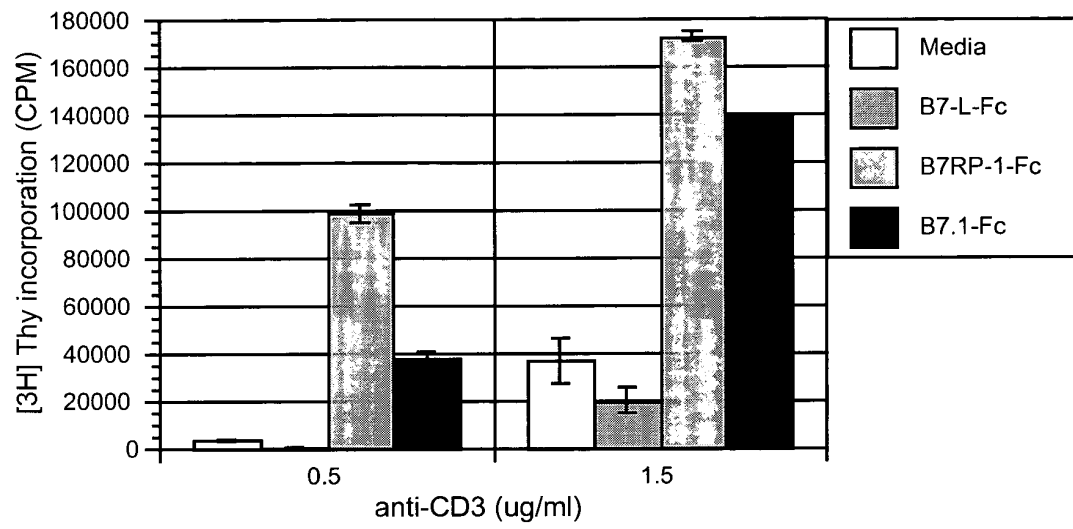


FIG. 11

